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ABSTRACT

Dean's list is an academic award for excellence which is potentially a powerful social reinforcer of the behaviors leading to academic achievement. The awarding of dean's list recognition should improve students' self evaluations relative to others, provide a social climate supportive of intellectual accomplishment, and enhance the academic performance of its recipients in subsequent terms. The present research assessed the effects of dean's list recognition on academic achievement using regression discontinuity analyses of student transcript data. Students who received dean's list recognition earned significantly more grade points and higher grade point average in subsequent terms than expected by extrapolation from the performance of non-dean's-list students. The present findings do indicate that the dean's list award can effectively reinforce academic achievement, at least for those students earning grade point averages just above the 3.5 cutting point. (Author/LAA)

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Social Reinforcement of Excellence: Dean's List and Academic Achievement

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Several studies have suggested that recognition of academic achievement increases the student's self-esteem or his expectancies for his future performance. In a series of studies Thistlethwaite (1959, 1961; Thistlethwaite & Campbell, 1960) explored the effects of social recognition on motivation of high school seniors to seek advanced training. His survey data showed that recipients of the National Merit Scholarship Certificate of Merit were more highly motivated to seek advanced degrees when the award improved their evaluations of themselves relative to others. McDavid (1959) speculated that high grades may be effective social reinforcers of academic achievement when they are perceived as being derived from external, non-objective standards and hence are perceived as a form of interpersonal evaluation by the teacher. Crandall and McGhee (1968) hypothesized that grades received for previous work form a basis for students' expectancies of future performance and that these expectancies are a motivational determinant of current academic behavior. Their correlational data supported this hypothesis although no causal relationship among these variables could be demonstrated.

Dean's list is an academic award for excellence which is potentially a powerful social reinforcer of the behaviors leading to academic achievement. The award may consist of as little as a notation of the student's transcript or it may involve presentation of a certificate to

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the student, notification of parents and home-town newspapers, and posting the student's name in a public place. Students report that such recognition often is followed by a second wave of rewards in the form of increased esteem of their friends, money from home, or even letters from their Congressmen. The awarding of dean's list recognition should improve students' self evaluations relative to others, provide a social climate supportive of intellectual accomplishment, and enhance the academic performance of its recipients in subsequent terms. The present research assessed the effects of dean's list recognition on academic achievement.

Determining the effects of dean's list is complicated by the non-random assignment of students to this treatment. Since only a select subsample of college students are given the award, they should perform better in subsequent terms than those not receiving the award, even if the award has no effect. In situations where all persons scoring above a cutting point on a decision variable receive a treatment and none of those scoring below the cutting point do, regression discontinuity analysis is appropriate for measuring treatment impact (Thistlethwaite & Campbell, 1960; Campbell & Stanley, 1963). Briefly, this technique involves regressing the dependent variables against the decision variable separately for the treated and untreated subsamples. If the null hypothesis were true, then the two regressions should predict the same score on the dependent variable for those scoring at the cutting point on the decision variable. If the treatment did have an effect, the regression line for the treated subsample would be displaced away from that of the untreated subsample, and the two predictions at the cutting point would differ.

If the dean's list award improves academic performance, the prediction made by the dean's list regression line at the cutting point should be higher than the prediction made by the non-dean's list regression line at the same point.

Method

Subjects

A probability sample of 1002 students was drawn from the population of full-time students who had been enrolled for the three terms of the academic year at the main campus of a large state university. Data were recorded from the transcript of each student in the sample and included. grade points earned and grade point average in each of the three terms.

Grade points are an index of the amount and quality of the student's work computed at the rate of four points for each credit of A work, three for each credit of B, two for each credit of C, and one for each credit of D work. Grade point average is the grade point total divided by the number of credits attempted.

Procedure

At this university all students earning a grade point average of 3.5 or higher in an academic term (4.0, maximum) are placed on dean's list and receive notification from the deans of their colleges. The names of all dean's list students are posted in the student union building, and each student's term grade report indicates the dean's list award. In addition, most colleges send letters or cards to the student or his parents notifying them of the award, at least on the first occasion.

The sample was divided according to grade point average in term one into dean's-list and non-dean's-list subsamples containing 186 and 816 students respectively. Within each subsample the dependent variables,

grade points in term two (GP2), grade point average in term two (GPA2), GP3, and GPA3 were regressed against the decision variable, grade point average in term one. In each regression the best fitting polynomial equation was found by allowing linear, quadratic and cubic terms to enter the equation in a step-wise manner. In each case the simple linear regression provided the best model, and additional terms failed to increase R^2 significantly.

Results

The regression discontinuity analyses indicated that the dean's list award significantly increased subsequent performance on three dependent variables. Figure 1 shows the regressions of GP2 on GPA1 for the dean's-list and non-dean's-list subsamples. The effect of the dean's list award is indicated by the difference between the intercepts of the two regression lines with a perpendicular erected on the X axis at the 3.5 cutting point. The intercepts of the regressions of the dean's list and non-dean's list groups, 38.81 and 35.75 respectively, were found to be significantly different ($p < .01$) by a t test of the difference between regression intercepts (Walker & Lev, 1953). The difference of 3.06 grade points between these two predictions was approximately the equivalent of a student's earning one letter grade higher in a three credit course.

Figure 2 shows the regressions of GPA2 on GPA1 for the two subsamples. The cutting point prediction made by the dean's list regression, 3.355, was significantly higher than that made by the non-dean's list regression, 3.185 ($p < .05$).

To test the longer-term effects of dean's list on performance in the second subsequent term, GP3 and GPA3 were used as dependent variables in regression discontinuity analyses. No difference between the cutting-point predictions was found for GP3.

Figure 3 shows the regression of GPA3 on GPA1 for the dean's list and non-dean's list subsamples. The cutting-point predictions, 3.47 and 3.24 again significantly favored the dean's list group ($p < .01$).

Discussion

The results of the present study indicate that dean's list has a substantial favorable effect on the academic performance of its recipients in the subsequent term. Students who received this recognition tended to earn more grade points and a higher grade point average in the next academic term and a higher grade point average in the second following term than expected from extrapolations from the performance of non-dean's list students.

Because of the nature of regression discontinuity analysis, conclusions about the dean's list effect can be drawn confidently only for students scoring very close to the 3.5 cutting point on term one grade point average. While it is possible to extrapolate the non-dean's list regression lines throughout the range of scores earned by the dean's list group, the further the extrapolation beyond the cutting point, the less confidence can be placed in the validity of the extrapolation. Thus, to determine the magnitude of the dean's list effect on students earning a 3.8 on GPA1, one could compare the predictions made by the two regressions when GPA1 equals 3.8, but little confidence could be placed in that comparison.

The present findings do indicate that the dean's list award can effectively reinforce academic achievement, at least for those students earning grade point averages just above the 3.5 cutting point.

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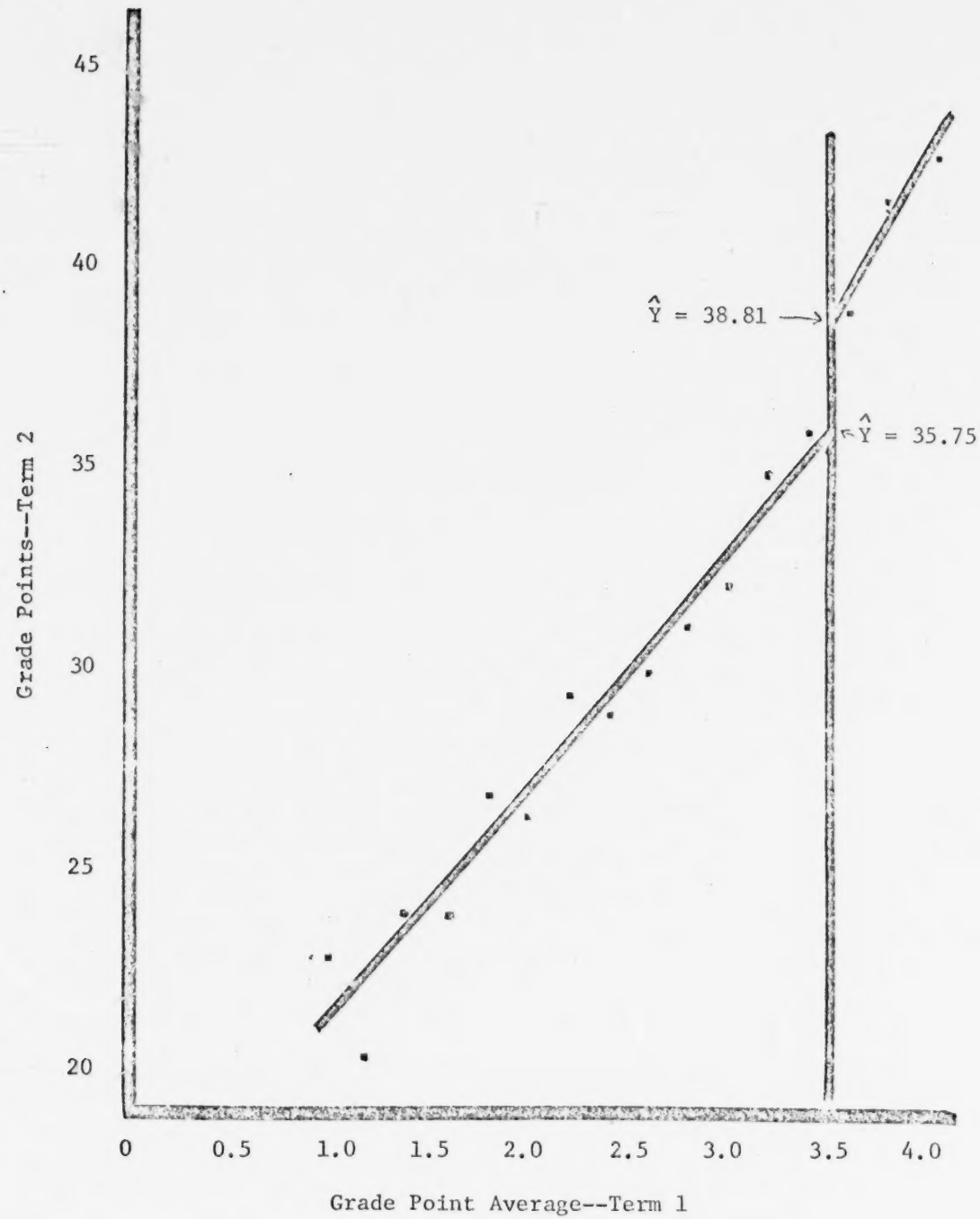

Figure 1. Regression of Grade Points Term 2 on Grade Point Average Term 1 for the Non-dean's List and Dean's List Groups.

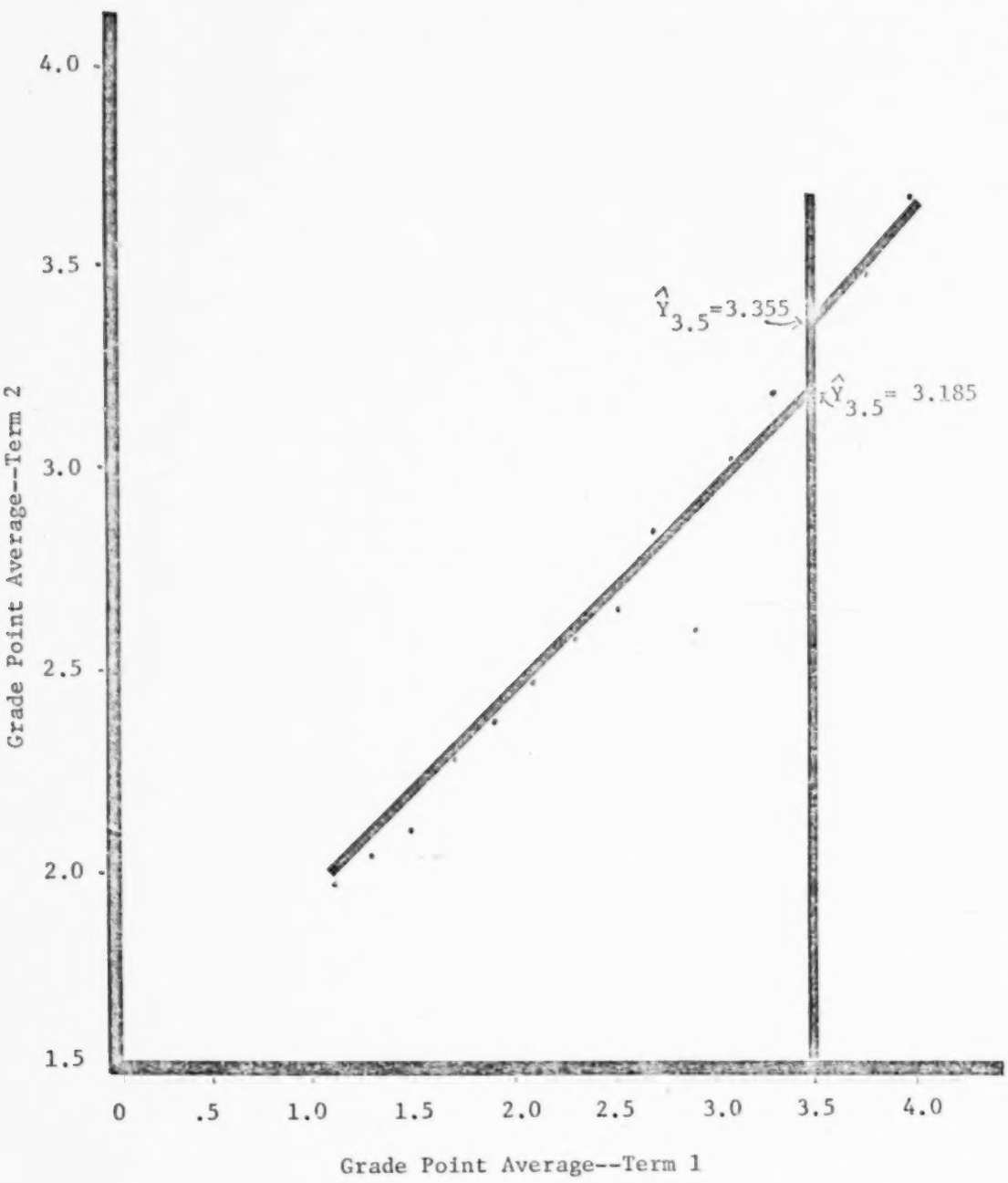

Figure 2. Regression of Grade Point Average Term 2 on Grade Point Average Term 1 for the Non-dean's List and Dean's List Groups.

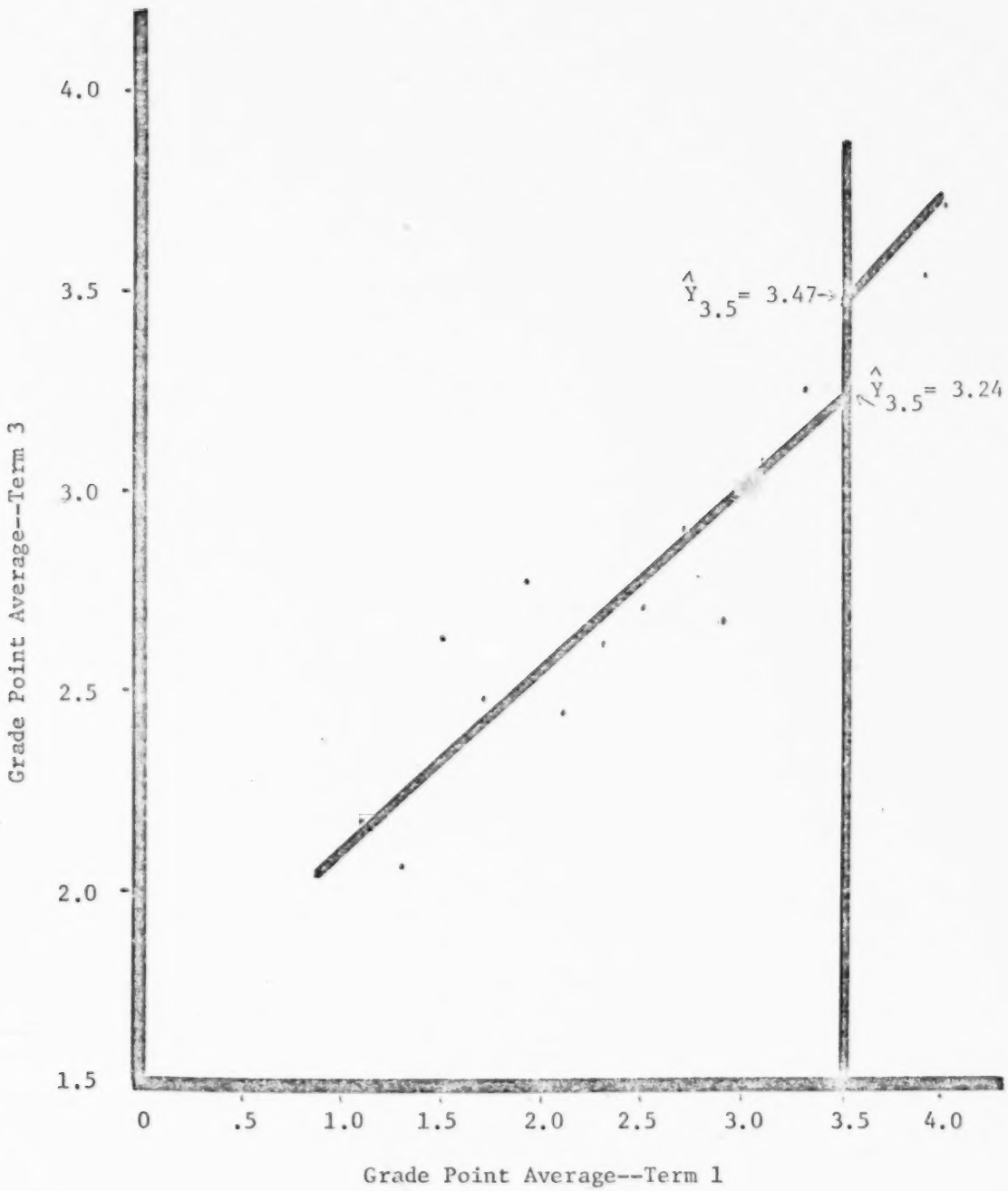

Figure 3. Regression of Grade Point Average Term 3 on Grade Point Average Term 1 for the Non-dean's List and Dean's List Groups.